DOCUMENT RESUME

ED 328 291 IR 053 453

AUTHOR Kern, Joanne F.
TITLE Using "Reader's Guide to Periodical Literature" on CD-Rom To Teach Database Searching to High School Students.
PUB DATE Jun 90
NOTE 58p.; Education Specialist Practicum, Nova University.
PUB TYPE Dissertations/Theses - Practicum Papers (043)

EDRS PRICE MF01/PC03 Plus Postage.
DESCRIPTORS Bibliographic Databases; Computer Literacy; High Schools; *High School Students; Indexes; Intermode Differences; *Learning Resources Centers; Library Skills; *Online Searching; *Optical Data Disks; School Libraries; *Search Strategies; *Teaching Methods
IDENTIFIERS *Readers Guide to Periodical Literature

ABSTRACT

The lack of opportunity for high school sophomores to learn database searching was addressed by the implementation of a computerized magazine article search program. "Reader's Guide to Periodical Literature" on CD-ROM was used to train students in database searching during the time they were assigned to the library to do research papers for English classes. All students were trained to use the print index and a sample group was trained on the computer through group instruction, demonstration, observation, and a hands-on-search. Students in the sample completed user survey forms from which success was measured by articles found, student preference of search method, and the perceptions, ease of use, and success reported by the students. The results indicated that the database sample group outperformed the print index slightly in the number of articles found, and that the electronic database was generally easy for the students to use. Students nearly all considered their searches successful and preferred the database search method. It was concluded that high school students can confidently use a user-friendly database with a little training and a monitor to provide troubleshooting help. Appendices include a guide on how to search "Readers' Guide" on the computer, user survey forms, and student data. (Author)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

ED328291

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

USING READERS' GUIDE TO PERIODICAL LITERATURE ON CD-ROM TO TEACH DATABASE SEARCHING TO HIGH SCHOOL STUDENTS

by

JOANNE F. KERN

A Practicum Report

Submitted to the Faculty of the Center for the Advancement of Education at Nova University in partial fulfillment of the requirements for the degree of Educational Specialist.

The abstract of this report may be placed in a National Database System for reference.

June/1990

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Joanne F. Kern

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

Authorship Statement

I hereby testify that this paper and the work it reports are entirely my own. Where it has been necessary to draw from the work of others, published or unpublished, I have acknowledged such work in accordance with accepted scholarly and editorial practice. I give this testimony freely, out of respect for the scholarship of other workers in the field and in the hope that my work, presented here, will earn similar respect.

Signed Joanne F. Kerr

Using Readers' Guide to Periodical Literature on CD-ROM to Teach Database Searching to High School Students.
Kern, Joanne F., 1990: Practicum Report, Nova University, The Center for the Advancement of Education.
Descriptors: CD/ROM/Databases/Online Searching/High School Students/Search Strategies/Library Skills/Research Skills/ Information Retrieval/School Libraries/

The lack of opportunity for high school sophomores to learn database searching was addressed by the implementation of a computerized magazine article search program. Readers' Guide to Periodical Literature on CD-ROM was used to train students in database searching during the time they were assigned to the library to do research papers for English classes. All students were trained to use the print index and a sample group was trained on the computer through group instruction, demonstration, observation, and a hands-on-search. Students in the sample completed user survey forms from which success was measured by comparing statistics on the search time used, the number of articles found, student preference of search method, and the perceptions, ease of use, and success reported by the students. The results indicated that the database sample group outperformed the print index group slightly in the number of articles found, and that the electronic database was generally easy for the students to use. Students nearly all considered their searches successful and preferred the database search method. It was concluded that high school students can confidently use a user-friendly database with a little training and a monitor to provide troubleshooting help. Appendices include a guide on how to search Readers' Guide on the computer, user survey forms, and student data.

Nova University
Center For The Advancement of Education
3301 College Avenue
Fort Lauderdale, FL 33314

Observer Verification Form

Verification of Practicum Activity

Dear Observer:

Practicum students in Nova's M.S. and Ed.S. programs are asked to provide external verification that the project activities reported in their final practicum documents took place as described. You have been designated an observer to fulfill this confirmation function by the student named below. On this sheet, then, please write a note attesting to your knowledge of the project activity described in the final practicum report to which this will be attached. (Note that you are not asked to evaluate or make judgments about the quality of the project.)

Practicum Title USING READERS' GUIDE TO PERIODICAL LITERATURE ON CD-ROM TO TEACH DATABASE SEARCHING TO HIGH SCHOOL STUDENTS

Student's Name Joanne F. Kern

Program Site Riverdale High School Date 5/30/90

Observer's Name Johnny A. Scott Johnny A. Scott
(please print--------and sign)

Observer's position Principal Phone # 694-4141

Observer's comment on impact of the project (handwritten):

This project has provided our students a chance to use the computer during their research on topics and information search. We plan to expand this project to all levels in our school.

Table of Contents

Page

Title Page i

Authorship Statement ii

Abstract iii

Observer's Verification iv

Chapters

I. Purpose 1

II. Research & Solution Strategy 7

III. Methodology 22

IV. Results 28

V. Recommendations 35

Reference List 37

Interviews 38

Bibliography 39

Appendices

Appendix A: How to Search Readers' Guide on the Computer 41

Appendix B: User Surveys 43

Appendix C: Data Collection: Student Data 46

CHAPTER I

Purpose

The practicum setting was the library of a public four-year high school located in southwest Florida. The school was built eighteen years ago to accommodate growth in the eastern part of the county and to allow for the transfer of students from a disbanded segregated high school in an inner-city neighborhood to an integrated school. The school plant, a sprawling red brick structure, was surrounded by twenty portables and athletic fields.

The approximately 2130 students attending the school were drawn from several rural and urban areas, including a planned retirement community, a country town, housing developments, and the country connecting these areas. Minority students were bussed from an inner-city housing project, several suburban neighborhoods, and a rural migrant community. Students were members of middle and lower income families. Some parents were engaged in farming and cattle ranching, many owned small family businesses, some were in the trades and service occupations, and some were professionals.

The school population was approximately 77 percent Caucasian, 14 percent Black, eight percent Hispanic, and one-half percent Asian. About 450 students were eligible for free lunch, and 125 received a reduced-price lunch. Nearly three percent of the

students were eligible for the migrant program, and two percent attended the bilingual classes. Ability level of the student population, measured by the number of English classes on each level, showed that over twice as many students were in "average" classes as in "advanced" classes on each grade level. Each year, at least eight to 14 percent of the students dropped out of school. Follow-up studies of recent graduates showed that about 36 to 48 percent of the graduates went on to college or trade school, 15 percent entered military service, 45 percent worked full time, 18 percent worked part time, and eight percent were unemployed. In short, the student body was a diverse group with widely varied academic needs.

Two librarians and one aide staffed the library. The book collection was comprehensive, and had just been weeded down to 16,500 volumes. The periodical collection was well-rounded, containing 85 current subscriptions and several years of back issues of most titles. A large, up-to-date vertical file was available to students as were resources from about 17 subject areas of the Social Issues Resources Series (SIRS), a collection of reprinted articles and government documents.

The author was media department head and trained media staff, purchased materials and equipment, taught research skills, and assisted classes with research papers. The library was run traditionally. The staff had not been eager to experiment with

electronic innovations because of the costs involved and the possibility of new systems becoming quickly obsolete; however, two Apple computers had been in use by students and staff for four years.

During the months preceding this practicum, the total school staff, the county media administration, and the school board had become very interested in increasing innovative computer use in the schools. Two more Apple computers had been ordered for use in the library, and an automated circulation system was being prepared for use on an IBM computer system. Many students had used computers in classes; however, it was not known if the school's general student population was computer literate.

Problem

Few, if any, students at this school were able to do computer database searching because they had not had the opportunity to learn. Two years before, when the author researched online and Compact Disc-Read Only Memory (CD-ROM) database searching for possible purchase, it was concluded not to be a need, but that became no longer the case. Several things brought about the change. First, local public and college libraries had expanded database use to include not only the card catalogs, but also periodical and news indexes, and students needed to be able to use them to do research. Second, the state of Florida had

announced that it would have all high school library card catalogs put on a database within two years and students would need to be able to use them. Third, upper level students and former students had begun to report being overwhelmed by the database equipment in the other libraries they were using. Fourth, new computer laboratories would soon be added to each district high school, to be available for teachers in all departments to bring whole classes to work on simulations, word processing of term papers, testing, and database searching; and students would need to be trained to use the computers and software. Finally, The Southern Association of Colleges and Schools (SACS) had added databases to the items to be found in an effective library.

Though some freshmen used library materials for science fair projects and term papers in Honors English, most students did not do real searching for a variety of materials on any topic until they were required to write a term paper in a sophomore English class. Before their classes began six to eight days of research in the library, all teachers of tenth grade English arranged for the researcher to come to their classrooms to show students with transparencies, discussion, and hands-on-experience how to search the print version of Readers' Guide to Periodical Literature.

The problem was, then, that the opportunity did not exist for students at this school to learn database searching. Sophomores

in English classes were the target group because all sophomores did term papers and all would be required to do at least two more research papers in junior and senior English classes. This project sought to solve the problem of tenth grade students who lacked the opportunity to learn database searching.

Outcome Objectives

For this project, a sample group of students was trained for database searching through group instruction and demonstration, the observation of another student doing a search, and a hands-on search with the help of a monitor, as needed. A search was considered successful if the student was able to find three to five articles on the search subject, which were useful to the research and available at the school. These were the expected outcome objectives:

Objective One: Over a ten week period, following training, 75 percent of the students in the sample group would be able to successfully complete a database search within 15 minutes.

Objective Two: During the same period, following training, 75 percent of the students in the sample group would be able to successfully complete a search in the print Readers' Guide to Periodical Literature within 15 minutes.

Objective Three: Over 75 percent of the students in the

sample group would choose the database search over the print search, according to answers on the survey.

Objective Four: Over 75 percent of the sample students would perceive the searches in either method as successful, as measured by answers on the survey.

Objective Five: More than 50 percent of the sample students would find the electronic search method easy or fairly easy to use, as measured by the survey answers.

Objective Six: More than 50 percent of the students in the sample, with little or no previous computer experience, would say the database searching increased their confidence in using the computer, according to survey answers.

CHAPTER II

Research and Solution Strategy

In order to develop a solution strategy, information was collected from research in journals and books, visits to libraries offering database searching, conversations with library professionals on site and by phone, talks with software and hardware vendors, and consultations with county level administrators and service technicians about hardware considerations. Some of the library visits were made two years earlier when the author researched CD-ROM use in libraries.

According to the literature, there were two ways to bring database searching to students in the school library setting. The older was through online searching, which required a searcher using a computer connected to a modem connected to a telephone line connected to one or more database sources for which subscriptions had been paid. The newer way was CD-ROM searching, which required a searcher using a computer connected to a CD-ROM player (disc drive) into which a CD-ROM disc had been loaded (Miller, 1989).

Nancy Nassar, in her 1988 literature search to determine whether to introduce online or CD-ROM searching in a middle school, discussed the need for database searching in schools and

some reasons why it was not being done.

> The development of online and CD-ROM database literature retrieval skills in the kindergarten through twelfth grade group has not kept up with the generalized computer instruction. The students are considered to be computer literate but they cannot engage in literature retrieval skills as another way to utilize the computer. These skills should be taught with the more traditional library instruction.
>
> The librarians are leaving the institutions of higher learning with certification or master's degrees in library science and may or may not have any courses, experiences, or training in online or CD-ROM searching. This is one reason why the students ... are not learning optical disc technology and online searching. Another valid and important reason ... is that the school libraries do not have the necessary funding to install the technology in their libraries. (pp. 23-24)

Online Searching

Online searching originated as a librarians' cataloging and bibliographic control tool, but the subject databases were made available to the public and to libraries by commercial vendors in the 1970's. Though considered expensive, online searching cuts through much tedious manual searching of printed sources and can be more current. There was, at first, a notion that the growth of databases would be exponential and printed indexes would disappear, but that has not happened because of the cost. In libraries, sometimes there is a two-tiered arrangement in which patrons pay for in-depth online searches in whole or in part while ready-reference search expenses are absorbed by the library as a normal part of reference services. In most situations, online

searches are done by professional searchers for the "end user" (patron) (Miller, 1989).

Online searching costs are not set costs because they consist of the database subscription price plus the phone charge for the actual minutes the search was being done and printed. Often it is difficult to estimate the cost ahead of time. Costs given for the University of Vermont Library, as quoted by Eaton (1989), showed a 1986 per search average of $7.12 for online searches versus $3.16 for CD-ROM and a 1987 per search average of $18.20 for online searches versus $2.40 for CD-ROM.

Though online searching was not being done at any local high school, the research showed it had been used at several schools throughout the country, often on an experimental basis.

CD-ROM Searching

A CD-ROM is a 5¼-inch disc, capable of storing the equivalent of 275,000 printed pages or 1,500 floppy discs, which is reliable and relatively inexpensive to manufacture (Taylor, 1989). It was an unplanned product developed in 1985, an offshoot of the laserdisc of 1978 and the optical digital audio disc (compact disc) of 1983 (Lambert in Nassar, 1988). The CD-ROM began to appear in libraries in 1985 in the form of Infotrac, a periodical index of about 900 titles, which became popular with users immediately (Miller, 1989). The advantages of CD-ROM in libraries, according to Bartenbach, were local control, end user access, predictable

per search costs, unlimited access, and privacy (Miller, 1989). The disadvantages were the expense of the hardware, hardware maintenance and software subscription; the space needed for the workstation, which accommodates only one user; the problems of security of the discs, which are easily misplaced, taken, or put into the wrong disc drive, causing damage; the lack of standardization of software search methods among software makers; and the staff time taken to instruct, monitor, and provide access to users (Barlow, 1987).

Research Studies

In journals and ERIC documents, researchers had reported on studies of student use of online database searching, CD-ROM database searching, a combination of the two, and a combination of either with printed index searching.

At Carmel High School, in Indiana, in 1986, Daniel Callison and the media specialists did a pilot study to see how well a class of 41 gifted high school juniors would be able to use online databases to conduct research for an English and social studies term paper in comparison to searches conducted the previous year without online search capability available. Wilsearch online software was used on one computer, and resources available to students included interlibrary loans through

Indiana University in Bloomington. The researchers found that students had little trouble using the software, were selective in titles chosen for printout or from interlibrary loan, and their attitudes toward the use of online were positive. However, they also discovered that, though students received 80 percent of the journals requested, they cited only 24 percent of them. Finally, the researchers were not sure they could justify recommending the expense of online searching to any but the wealthiest of high school libraries.

In 1987, researcher Diane Barlow and media specialists introduced Grolier's Academic American Encyclopedia on CD-ROM to high school students in Maryland to discover if the students could successfully use the new resource and whether they liked it or not. They found that students, with a minimal amount of instruction, were successful in the "browse entry" mode, which corresponds to the traditional print search strategy of retrieving an article by topic title. However, they found students unable to make effective use of the "word search" mode, which allows full-text searching using words, phrases, series of words, or "and" and "or" connectors.

The Director of Libraries at Sweetbriar College, Virginia, in 1987, did an informal side-by-side comparison of two CD-ROM databases, placing the two systems within a yard of each other in the library. InfoTrac's Magazine Index Plus was compared to Wilsondisc, a CD-ROM also allowing online searching, containing

Readers' Guide to Periodical Literature and Humanities Index. It was assumed that the student population was computer literate, but that less than 10 percent would have online searching skills. No training was offered; however, specific questions were answered by staff members when asked. Informal surveys of faculty, staff, and students were conducted during the three month test to determine which product best met the needs of users. The results were split, with faculty favoring Wilsondisc databases and students favoring the InfoTrac system. The advantages of Wilsondisc's online and Boolean search capabilities frustrated the students, who preferred the subject database. The researchers wondered if undergraduates, after extensive use of index-controlled access, would ask for increased sophistication in the search opportunities offered (Jaffe, 1988).

In their article, "Compact Disk Databases: Are They Good for Users?", two librarians from Cornell University reported on an experiment they performed in April, 1987, to try to discover answers to several questions concerning use of CD-ROM databases (Stewart). Using students enrolled in an educational computing class who were already assigned to seven laboratory groups, they assigned each group a different topic to be looked up in ERIC printed indexes or in ERIC on CD-ROM. Each laboratory was then divided into four experimental conditions: Group A; ERIC on CD-ROM with formal instruction; Group B: ERIC on CD-ROM without formal instruction; Group C: Printed ERIC with formal instruction; and

Group D: Printed ERIC without formal instruction. All students were asked to search ERIC from 1983-1986 until they found from ten to 25 relevant articles, to list the articles, and to record the time spent. One week later, they met to discuss the assignment with classmates, turn in bibliographies and logs, and complete a questionnaire on their opinions of the search methods.

The librarians compiled two scores for each student: the total number of relevant sources found and the average amount of time spent to obtain each relevant reference. Group A found an average of 16.6 relevant references in an average of 2.8 minutes; Group B, 13.6 references in 6.3 minutes; Group C found 8.4 in 16.5 minutes; and Group D, 7.7 in 17.6 minutes. The data definitely supported the researchers' first hypothesis, that students using ERIC on CD-ROM would outperform students searching the same topics in the ERIC printed indexes. Their second hypothesis, that students formally instructed on the use of ERIC on CD-ROM would outperform those not instructed, was supported also, but to a lesser degree. Formal instruction did not seem as useful to print index users. The third hypothesis, that students would prefer the CD-ROM index over the printed indexes, was overwhelmingly supported by questionnaire answers indicating that over 90 percent preferred CD-ROM alone and only 4.5 to six percent preferred print indexes. Surveys also showed that both CD-ROM use and instruction favorably affected students' perceptions regarding the ease of search method. The evidence concerning the fourth hypothesis, that students with

prior search experience would outperform other students, was inconclusive because few students had prior experience.

In a 1987 experiment at Brookdale Community College in New Jersey (Reese, 1988), the media specialist wanted to determine the relative effectiveness of two types of periodical indexes: the CD-ROM version of Infotrac II and the print Readers' Guide to Periodical Literature, both of which provide subject access to general interest periodicals. Five topics commonly researched by students were preselected and pretested by the researcher to develop a master subject heading guide and then ranked by level of difficulty. The objective was to randomly select twenty students, asking ten to use Readers' Guide and ten to use InfoTrac II. Two students were to search one of the tested topics in Readers' Guide; and two others were to search the same topic using Infotrac II; then, the students' results were to be compared to the master guide. Monitors explained the two forms students were to fill out listing subjects used, citations found, and whether the search was satisfactory enough to provide useful material for a five page paper. The researcher thought that two different measures (user satisfaction equals the number of relevant articles found, and experiment success equals the number of subject headings found compared to a master guide) would provide a method for determining the relationship between a subjective measure of success and an objective one.

Infotrac II broke down before all computer searches were completed. Nine students used Readers' Guide; and, when compared to the master research guide, 83 percent were able to complete the test successfully by locating 85 percent of all the relevant subject headings. Eight students completed searches in InfoTrac II; and, when compared to the master research guide, 63 percent of the students were able to successfully complete the test by locating 56 percent of all relevant subject headings. With InfoTrac II, students liked the ability to print out citations, though some had difficulty differentiating subject headings from citations on the screen. The researcher was disturbed to find that, of the five students who were not able to complete their searches satisfactorily because they did not locate the correct subject headings, those who were unsuccessful on InfoTrac II still considered their results to be satisfactory while those who were unsuccessful in Readers' Guide stated that they were dissatisfied with their search results. The researcher stated that, statistically, Readers' Guide proved to be more effective than InfoTrac II because the students using Readers' Guide were able to locate more of the relevant subject headings than the students using InfoTrac II in the same amount of time.

At Southern Methodist University Library, in 1986 (Eaton, 1989), InfoTrac on CD-ROM was used to introduce new information technology into a traditional library in order to experiment with its use and value. Two computer workstations were leased and

placed in a high traffic area near the card catalog and circulation desks. The system was open to all users, and a list of the library's journals and an InfoTrac thesaurus were placed beside each terminal. No training was given, but the reference staff maintained the supplies and did troubleshooting when asked. The machines were heavily used, and it was the librarian's opinion that InfoTrac was the cause of increased use of periodicals and microfilms. Problems reported were theft of software, damage to the disc by power outages, and poor quality print because cheap paper was used in the printer.

Visits to Libraries

The first library the author visited for a look at database searching was the Fort Myers Public Library, Main Branch, in March, 1988. Several CD-ROM's were in use, all at "dedicated" (one use only) workstations. Bibliofile's The Intelligent Card Catalog was very easy to use without help; however, Newsbank was set up with a keyboard that did not have keys to match the instructions, making it difficult to use. Books in Print Plus and Readers' Guide Abstracts were both fairly easy to use and to print from, but in both cases the computer moved through the programs rather slowly. The programs were all new and the staff was not yet well acquainted with them (Beattie, 1988). On a return visit to the library, in 1990, it was discovered that the same CD-ROM titles were still available. Readers' Guide Abstracts was again used and

seemed to have been changed as it was very quick and easy to use in either search mode.

When the author visited the Ft. Wayne, Indiana, Public Library, in April, 1988, it was discovered that reference librarians had been doing online searching there for the public on many databases for three years. There were no CD-ROMs in use, and the librarian stated emphatically that there were no plans to order any. He did searches for the author on DIALOG and LISA; and, since the first $15.00 of the search was free to users, these two searches were done "free" for $9.29 (Hall, 1988). On a return visit to that library, in December, 1989, two magazine indexes were available on CD-ROM. InfoTrac II was available at two work-stations in the reference room and one in the young adults' room, and a sixth grader was using one of those in the reference room. EBSCO's Magazine Article Summaries was available at another work-station in the reference room; and, though the author followed directions, several search attempts yielded no results. The disc drive had a lock on it; and, when the reference librarian was asked why, he said it contained a buzzer to alert the staff if the hard drive or CD-ROM drive were being tampered with. Because the database searcher two years before had been so sure CD-ROM would not come to that library, the author asked this librarian how the decision to install CD-ROMs had been made; and he replied, "by committee" (Wright, 1989).

InfoTrac II and ERIC on CD-ROM were being used at the Bracken Library at Ball State University when the author visited in April, 1988. Most students were on vacation, but of the four InfoTrac II stations available, two were in use, and of the two ERIC stations available, one was in use and one was "down." The reference librarian said InfoTrac II and ERIC were both very popular with students and very easy to use. At that time, the library had six other CD-ROM databases on order (Meyer, 1988).

On a visit to the Indiana University / Purdue University Library at Ft. Wayne, Indiana during the same week, in April, 1988, the author found ERIC, Psychological Abstracts, and Business Periodicals Index in use at three CD-ROM stations at a long table. When the author asked about InfoTrac II, the reference librarian, who was the assistant director, said that they had chosen not to have InfoTrac II because "at $12,000 for one machine, $16,000 for four, we find it too expensive." She commented further that electronic searching there was mostly done by upperclassmen, graduate students, and faculty, and that underclassmen used the print indexes (Violette, 1988).

While visiting the Barron Collier High School Library in Naples, Florida, during a SACS study, in October, 1989, the author observed students using an abridged version of InfoTrac called "TOMS," later discovered to be Text on Microform System. During a follow-up phone call to learn more about the set-up, Joe Lyons,

one of the media specialists, told the author they had answered an advertisement for a free, one year trial of hardware and software. Then, the second year, they were leasing hardware, getting a frequently updated CD-ROM and full-text microfiche for $2500 per year; and they had also purchased three fiche readers for $170 each. When asked if students were instructed on TOMS use, he answered that, at first some classes had been trained as a whole, but that none were now trained as students didn't seem to need the instruction. He also said TOMS was always the students' first choice for searching, and that print indexes were used only when TOMS was not available.

Solution Strategy

A review of the literature and observations made during library visits indicated that students needed to learn database searching as a part of computer literacy and library skills training. The advantages of the electronic search method were that the search could be broader or more in-depth by including retrospective and current sources and yet be completed more quickly and easily than a print index search. A decision concerning which CD-ROM software and which computer and hardware should be used was then determined by considering their appropriateness, ease of use, and cost.

The use of an electronic encyclopedia for database searching did not seem important, as high school students were expected to compare several encyclopedia sources and to choose the best, rather than to use one exclusively. Software which would be most helpful to the target students was a periodical index. Of those seen or heard about, InfoTrac II was too expensive and EBSCO's Magazine Article Summaries was too confusing to use. That left InfoTrac's TOMS, Wilson's Readers' Guide to Periodical Literature (RG), or Wilson's Readers' Guide Abstracts (RGA), all of which were appropriate and easy to use. The library had subscribed to print indexes of RG for many years and to RGA for the past two years, and students preferred RG because they wanted to see the magazine hard copy, not an abstract. Three other factors made RG more attractive than RGA: first, less text meant less to read on screen, and research indicated that people read electronic text about 22 percent more slowly than text on paper (Barlow, 1987); second, less text to read meant less to print which would save wait time of other users and computer paper; and third, the price of RG was about one-half as much as RGA. A call to Wilson Company revealed that RG was available to schools for $825 per year, including online search capabilities which the library was not set up to use. A call to InfoTrac revealed that TOMS was available for $1147 for eight months. Readers' Guide to Periodical Literature was chosen as the

software to be used for the database searching.

Hardware compatible with Readers' Guide was an MS DOS system, according to the Wilson catalog; so an IBM XT clone was chosen. The CD-ROM drive offered by Wilson, a Hitachi, which the county media technicians considered a good one, was purchased. Hardware and software costs totalled about $3100.

The solution strategy, then, was to train high school students, through demonstration, observation, and hands-on-experience, to do database searching with Readers' Guide to Periodical Literature on CD-ROM and an MS DOS clone workstation.

CHAPTER III

Methodology

Preplanning

The hardware and software to be used to train students in database searching were ordered. Teachers of sophomore English classes were asked to sign up for times to bring students to the library during the third quarter for term paper research work. The research paper project was discussed with the teachers then, and times were arranged for the author to visit each classroom to introduce Readers' Guide print index, the vertical file, and SIRS materials, as traditionally was done. The teachers were informed also about the new Readers' Guide database which would be available to their students in the library.

Implementation

The hardware and software were received and set up in the library. The monitor, keyboard, and printer were put on a table beside the print index RG, while the computer and disc drives were put behind the nearby circulation desk for greater security. The software was set up to be used in the "browse" mode only, which corresponded to traditional subject searching in print indexes. Directions for use, printed on goldenrod colored paper (Appendix A: 41), were placed on the computer. Staff, interested teachers,

and student monitors were trained to use the equipment and software, through demonstration, observation, and individual hands-on-experience. One student volunteer was asked to do a search using the Readers' Guide print index and another to search on the computer database and then each was asked to fill out User Surveys (Appendix B: 43), in order to test them. The surveys were color-coded: green for the print index, and goldenrod for the database. The User Surveys were then revised to correct errors and to clarify questions, and a log of daily progress of the research project was set up.

The researcher then began visiting classrooms to train students to use the Readers' Guide print index, the vertical file, and SIRS. The meanings of the words "subject," "entry," and "citation" were explained carefully because students needed to know those words to use the computer program. Students were told that, in the library, print indexes and a computer database would be available for them to use to find magazine articles on their research topics.

Of the 22 sophomore English classes doing library research, the 11 "average" classes who used the library during the ten week practicum period were the target group. Students whose names were listed beside the odd numbers on each class roster were in the total sample group. That is, students on the roster who were listed first, fifth, ninth, thirteenth, seventeenth, and

twenty-first were in the sample group for using the Readers' Guide print index and were highlighted on the roster in yellow. Students who were listed third, seventh, eleventh, fifteenth, nineteenth, and twenty-third were in the sample group for using the computer database version of Readers' Guide and were highlighted on the roster in orange.

On the day each class began library research, students were made aware that some classmates would be asked to use certain research tools. The method of selection from the roster and the names of students in each group were pointed out, and students were shown the highlighted rosters. Students were informed that any student could use the Readers' Guide print index at any time and receive help, but that students in the identified group would be asked to fill out a questionnaire. Classes were also advised that identified students would be allowed to do a computer database search first and then any others who wished to might do so. To eliminate crowds at the computer, students were asked not to stand by the computer until their names were called; but in most classes, this was not necessary. Names of volunteers who wished to use the database after the sample group had finished were noted on the bottom of the roster and trained in that order.

Monitoring

Students in the sample database group were asked to gather at the computer for group instruction and the demonstration of a one

subject search in the "browse" mode. Then, both sample groups were gathered to be shown the User Surveys. Groups were asked if anyone was ready to begin searching for magazine articles, and interested students from the sample were trained first. The monitor had students sign and fill out the top of the User Survey and then entered the search starting time. For the print index, students were asked what they remembered of the instructions given and were shown procedures they didn't know. They wrote citations on magazine request slips and gave them to the librarian, and the monitor noted the finish time. After magazine articles had been looked at by the students, they were asked to finish filling out the survey. The monitor read parts of the survey to the students to save time and to ensure that they were completed. The monitor then initialed the survey form and computed the time the student had spent on the search.

For the database group, a student was asked to sit at the computer beside the monitor while the next student to be trained observed the search. The student on the computer was asked to type in the subject and check to see if any citations were given; and, if none was, the monitor suggested an alternative or reworded subject. If citations were given, students were shown how to view them and print those desired. When the search was over, the ending time was noted, the magazines retrieved, and the survey completed. Training continued until all students in each sample

group had had the opportunity to complete searches.

In the 11 targeted classes, the possible total sample could have been about 132 students. Taking into account small classes and frequent student absences, and considering that some of the students were researching topics for which magazine articles were not a good source, i.e. "Hitler" or "Socrates," fewer students of the sample group actually conducted magazine searches. There were 24 students in the print index sample group and 24 in the database sample, making a total sample of 48 students. Two more students in each group signed survey forms and began research, but did not complete the research or the surveys; those incomplete forms were deleted and those students were not included in the sample data.

Evaluation

Data was collected from the User Surveys and listed on two data collection sheets, one for print index data and one for database data. Data appeared in eight columns (Appendix C:46). In column 1, the students trained were numbered, listed by initials, and totaled. In column 2, the total individual search time, figured from survey item 1, was noted. In column 3, the number of useful articles found and available was listed from survey item 4. In column 4, student search method preference, the answer to survey item 11, was recorded; and, in column 5, students' perception of success of the search, from survey item 7, was noted.

In column 6 appeared students' perception of the ease of the search, from survey item 8; and in column 7 appeared students' former computer experience, from survey item 9. In the eighth column, students' perception of whether or not they had increased in confidence was tallied from item 10.

CHAPTER IV

Results

The data collected on the two data collection sheets, one for print index search data and one for computer database search data, were used to evaluate the outcome objectives and thus determine the results of the study.

Objective One stated: Over a ten week period, following training, 75 percent of the students in the sample group would be able to successfully complete a database search within 15 minutes. From the data in columns one, two, and three of the database collection sheet, the percentage of students in the sample database group who found three to five useful articles within 15 minutes was computed to determine if the objective was met.

Though in the database sample, the group mean was 3.75 articles found in 10.96 minutes, the objective, as stated, was not met because only 12 students, or 50 percent of the group found three to five useful articles within 15 minutes. Twenty of the students, or 83 percent, completed the search within 15 minutes, but several students were only interested in finding one or two articles because that is all they needed for the research project. Some teachers required that only three to five resources be used for the research paper and specified that they be varied among magazines articles, books, newspaper articles, pamphlets, and

encyclopedias; therefore, students counted, for this objective, only those articles they declared useful after looking at the magazine hard copy and their other resources. The author understood, then, that because of this intervening variable, the number of articles in the definition of "successful" as stated in the objective had been too great.

Only three of the 24 students in this group felt their searches were unsatisfactory, including a student who found no articles, one who found two very short articles, and one who found five which were all too general to be useful. On the other hand, 21 students, or 88 percent of the database sample group, perceived their seaches as "successful."

In this sample group, students' search time ranged from two to 28 minutes and the number of useful articles received ranged from zero to 12.

Objective Two stated: During the same period, following training, 75 percent of the students in the sample group would be able to successfully complete a search in the print Readers' Guide to Periodical Literature within 15 minutes. Using the data in columns one, two, and three of the print index data collection sheet, the percentage of students in the sample print index group who found three to five useful articles within 15 minutes was computed to determine whether this objective was met.

Though in this sample group, the mean was 3.29 articles found in 12.75 minutes, the objective, as stated, was not met because only 11 students, or 46 percent of the sample found three to five useful articles in 15 minutes. Seventeen of the students, or 71 percent, completed the search within 15 minutes; but, since many were only interested in finding one or two good articles, they were very selective about which ones they chose to use. As with the database group, the author was compelled to reexamine the definition of "successful" as three to five useful articles. The only student in this group who perceived a search as unsuccessful was one who found no available articles on naval aviation and guided missiles, and the author agreed that this was the only search in the group which actually was not "successful."

In the print index sample, students' search time ranged from four to 25 minutes, and the number of useful articles received ranged from zero to five.

Comparing the two sample groups, then, it can be seen that the database group slightly outperformed the print index group by locating an average of 4 (3.8) articles in 11 minutes versus the print group's average of 3 (3.3) articles in 13 (12.8) minutes (Table 1).

Table 1

Database Versus Print Index Comparison Chart

		Database	Print Index
Range:	Useful Articles	0-12	0-5
Mean:	Useful Articles	4 (3.8)	3 (3.3)
Range:	Search Time/Minutes	2-28	4-25
Mean:	Search Time/Minutes	11	13 (12.8)

Objective Three stated: Over 75 percent of the students in the sample group would choose the database search over the print index search. From column four of the data collection sheets, the percentage of students preferring the database search over the print index search was computed to discover if this objective was met. Objective three was met by the students in the database group, but not by those in the print index group.

Of the database sample, 21 students, or 88 percent, said they preferred the database search; and those students had had experience with both methods. Of the print index sample, who had had no experience with the database method, 11 students, or 46 percent, said they preferred the database version; and 8 students, or 33 percent, said they didn't know which they preferred. Only 5

students, or 21 percent of the print index group, and 2 students, or 8 percent of the database group, preferred using the print index.

Objective Four stated: Over 75 percent of the sample students would perceive the searches in either method as successful. From column five of the data collection sheets, the percentage of students perceiving the searches to be successful was computed to find if this objective was met.

This objective was met by both groups. As noted earlier, in the database group, 21 students, or 88 percent, considered their searches successful, while in the print index group, 22, or 92 percent, perceived their searches as successful. Having monitored all searches, the author concurred that those searches were "successful" in meeting the students' research needs.

Objective Five stated: More than 50 percent of the sample students would find the electronic search method easy or fairly easy to use. To determine if this objective was met, the percentage of students using the electronic method, who perceived the searches as easy or fairly easy, was figured from column six of the data collection sheet.

This objective was met, with 23 students, or 96 percent, perceiving their searches as easy or fairly easy. The author observed that students had no difficulty using the computer hardware or the Readers' Guide program.

Objective Six stated: More than 50 percent of the students in the sample, with little or no previous computer experience, would say the database seaching increased their confidence in using the computer. To decide if this objective was met, the number of students with little or no computer experience was counted from column 7 and their answers from column 8 was counted. Then, the percentage of those choosing "N" in column 7 and also "Y" in column 8 was computed.

The results for this objective turned out to be surprising since no students in either group said "Never" as the amount of computer experience they had had previously. Two students neglected to answer the question, while 46 students, or 96 percent, said they had had "Lots" or "Some" computer experience. More than half of the database students said this computer use had increased their confidence; but most of the others stated verbally, when they marked the survey forms, that they had already known how to use a computer and were already confident.

Observations and Conclusions

Students in the database sample group outperformed the print index group even though database use was entirely new to most students while all the students had just been trained to use the print index. The author and library staff concluded that the use of Readers' Guide software to teach students database searching was successful and would highly recommend its use to other school

librarians. There was no need for the general directions to be posted on the computer as most students were computer literate and were able to use the hardware easily. The program was user friendly, and with a staff member to give beginning directions and troubleshoot as needed, most students were able to work independently. The author would recommend continuing to train students in print index use in the future because each student can be given a volume to search during group demonstration and discussion and the training enables students to use the print magazine index or the database.

It would be of interest to see this project replicated by students who were asked to locate as much useable information on each topic as possible to see how many articles they would find. It would also be of value to have the project repeated using TOMS by InfoTrac as the CD-ROM database to see how the results would compare to those found during this study.

CHAPTER V

Recommendations

It has been decided that teachers, staff members, and the student body will be made aware of what database searching is and that it is available to them in the school library. Students from Exceptional Student Education, Skills, and Advanced Placement classes have all had an opportunity to use the software as well as those from the "average" classes trained during the practicum project. The software will be reprogrammed into the computer so that other aspects of the program, including more in-depth search methods, will be available to users. Students will be informed of the database availability during freshman library orientation; and students in grades 10 through 12 will be introduced to it as they come to the library individually or with classes to do research. An article, including a photo of a student using the database, appeared in the student newspaper during the practicum period; and the database availability may be publicized on the student video news program in the future.

Because database searching is not currently being done in any other high school in the county, media specialists from the other high schools and some middle schools may be interested to know about the equipment and software that have been used for this

project and what the results were. The author has offered to make an oral presentation and demonstration of hardware and software at the county media inservice or at a county media association meeting.

Because database software is presently in a state of flux, new products will need to be previewed for purchase, through demonstration or trial CD's whenever possible; and the researcher will need to continue to share resources and experiences with other media specialists concerning the teaching and use of database searching in the future.

REFERENCES

Barlow, Diane, Brenda Karnes, and Gary Marchionini. "CD-ROM in a High School Library Media Center: A Research Project." School Library Journal, Nov. 1987, pp. 66-72.

Callison, Daniel, et al. "Using Wilsearch with High School Students: A Pilot Study." ERIC ED 275 343.

Eaton, Nancy L., Linda Brew Mac Donald, and Mara R. Saule. CD-ROM and Other Optical Information Systems. Phoenix: Oryx Press, 1989.

Jaffe, John G. "For Undergrads: InfoTrac Magazine Index Plus." American Libraries, Oct. 1988, pp. 759-761.

Miller, William, and Bonnie Gratch. "Making Connections: Computerized Reference Services and People." Library Trends, Spring 1989, pp. 387-401.

Nassar, Nancy. "CD-ROM: The Silent Revolution." ERIC ED 302 237.

Reese, Carol. "Manual Indexes Versus Computer-Aided Indexes: Comparing the Readers' Guide to Periodical Literature to Infotrac II." RQ, Spring 1988, pp. 384-389.

Stewart, Linda, and Jan Olsen. "Compact Disk Databases: Are They Good for Users?" Online, May 1988, pp. 48-52.

Taylor, David C. "Reference ROMs: Six Implications for Libraries Building CD-ROM Database Services." American Libraries, May 1989, pp. 452-454.

INTERVIEWS

Beattie, Barbara and Robin Henry. Personal interviews. Public Library, Main Branch, Ft. Myers, Florida. March 29, 1988.

Hall, Patrick. Personal interview. Public Library, Main Branch, Ft. Wayne, Indiana. April 6, 1988.

Lyons, Joe. Telephone interview. Barron Collier High School, Naples, Florida. December 6, 1989.

Myer, Wayne. Personal interview. Bracken Library, Ball State University, Muncie, Indiana. April 6, 1988.

Violette, Judy. Personal interview. Indiana University/ Purdue University Library, Ft. Wayne, Indiana. April 5, 1988.

Wright, John. Personal interview. Public Library, Main Branch, Ft. Wayne, Indiana. December 22, 1989.

BIBLIOGRAPHY

Bailey/Howe Memorial Library, University of Vermont and State Agricultural College. Computer-Assisted Reference Service Statistics, Oct. 1987.

Lambert, Steve. CD-ROM: The New Papyrus. New York: Microsoft Press, 1986.

APPENDICES

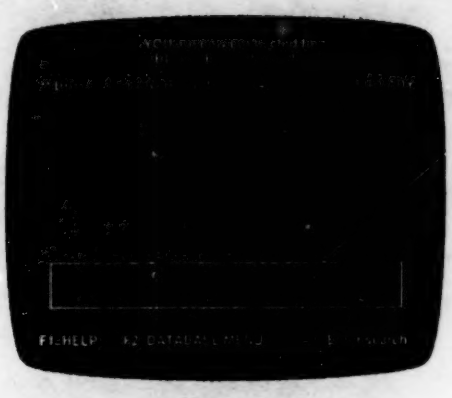
Appendix A

How to Search Readers' Guide on the Computer

HOW TO SEARCH Readers'Guide ON THE COMPUTER

1. Type your subject.

   ex. space flight
   crack
   Mafia
   AIDS
   Gorbachev, Mikhail
   Nicaragua
   dreams

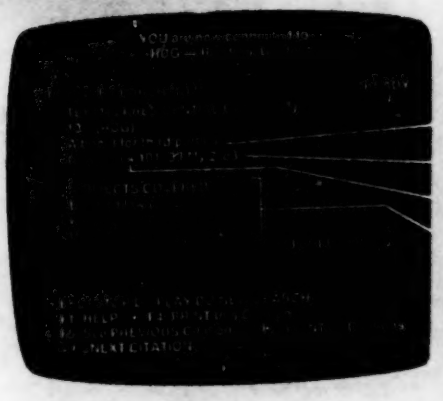


2. Watch for your subject on screen.
   The number of articles on that subject
   will be in front of each subject.

   ex. 67 CRACK(COCAINE)

3. Push ENTER

   (Screen flashes: READING CD-ROM WAIT)



4. Read list of articles on screen.

5. If you want to print the list, see if printer is on, then push "F4" key.

6. Type another subject to search if you wish. Read. Push "F4" key to print.

7. When finished printing, roll printer paper by hand to the tear lines.

8. Tear paper off and turn off printer.

Appendix B

User Surveys

Appendix B-PI Print Index

Appendix B-DB Database

Appendix B-PI

USER SURVEY
Print Index
Monitor:_____

Readers' Guide to Periodical Literature
Print Index Search

Student: _____ Date: _____

Teacher: _____ Period: _____

1. Search Time Began: _____ Time Ended: _____ Total Time: _____

2. What Subjects did you search? (1)_____

   (2) _____ (3)_____

3. How many magazine articles did you ask for? 1-2_____ 3-5_____
   6-9_____ 10 or more_____

4. How may articles did you get: 1-2_____ 3-5_____ 6-9_____
   10 or more_____

5. Have you used the printed Readers' Guide index before? Yes No
   Was it: Easy Fairly easy Confusing Hard

6. Have you used a computer database before? Yes No
   Was it: Easy Fairly easy Confusing Hard

7. Do you think your Readers' Guide magazine search today was successful? Yes No

8. Do you think your magazine search was: Easy Fairly easy
   Confusing Hard

9. Have you used a computer before? Lots Some Never

10. Do you think you can use the Readers' Guide print index better now than before you did this search? Yes No

11. Would you prefer to do a magazine search using Readers' Guide as a print index or as a computer database?
    Print index Computer database

12. Do you have any suggestions that might make it easier for another student to use the Readers' Guide print index? Yes No

    If so, please explain briefly: _____

    _____

    _____

Appendix B-DB

USER SURVEY
Database
Monitor: _____

Readers' Guide to Periodical Literature
Computer Database Search

Student: _____ Date: _____

Teacher: _____ Period: _____

1. Search Time Began: _____ Time Ended: _____ Total Time: _____
2. What subjects did you search? (1) _____
   (2)_____(3)_____
3. How many magazine articles did you ask for? 1-2_____ 3-5_____
   6-9_____ 10 or more ____
4. How many articles did you get? 1-2_____ 3-5_____ 6-9_____
   10 or more_____
5. Have you used the printed Readers' Guide index before? Yes No
   Was it: Easy Fairly easy Confusing Hard
6. Have you used a computer database before? Yes No
   Was it: Easy Fairly easy Confusing Hard
7. Do you think your computer search today was successful? Yes No
8. Do you think your computer search today was: Easy Fairly easy
   Confusing Hard
9. Have you used a computer before? Lots Some Never
10. Do you think you can use the computer better now than before you did this computer search? Yes No
11. Would you prefer to do a magazine search using Readers' Guide as a print index or as a computer database?
    Print index Computer database
12. Do you have any suggestions that might make it easier for another student to use the computer search method? Yes No

If so, please explain briefly: _____

_____

_____

Appendix C

Data Collection

Appendix C-PI Print Index

Appendix C-DB Database

PRINT INDEX

DATA COLLECTION

1 Student	2 Search Time Min.	3 Useful Articles Received	4 Preference "P" "D" * Don't Know	5 Perceived Successful "Y" "N"	6 Perceived Easy "E"F"C"H"	7 Computer Exper. "L"S"N"	8 Increased Confidence "Y" "N"
1. AF	4	4 (3-5)	* Don't Know	✓	F	L	✓
2. MN	4	2 (1-2)	✓	✓	E	S	✓
3. MM	5	2 (1-2)	✓	✓	E	L	✓
4. SS	6	3 (3-5)	Don't Know	✓	F	L	✓
5. LG	7	4 (3-5)	✓	✓	E	no answer	✓
6. IS	7	4 (3-5)	✓	✓	E	S	✓
7. CD	8	5 (3-5)	Don't Know	✓	E	S	✓
8. AA	10	4 (3-5)	"	✓	F	S	✓
9. CA	10	4 (3-5)	✓	✓	F	S	✓
10. JF	10	1 (1-2)	Don't Know	✓	F	S	✓
11. CP	10	2 (1-2)	Don't Know	✓	E	S	✓
12. KA	11	5 (3-5)	✓	✓	E	L	✓
13. TD	12	4 (3-5)	✓	✓	E	L	✓
14. CA	13	5 (3-5)	✓	✓	E	no answer *	✓
15. BM	13	2 (1-2)	✓	✓	F	S	✓
16. JK	14	1 (1-2)	✓	Some	E	L	✓
17. LS	15	4 (3-5)	✓	✓	E	L	✓
18. PR	17	5 (3-5)	✓	no answer	no answer	S	✓
19. CC	20	0	✓	✓	E	L	✓
20. VS	20	5 (3-5)	✓	✓	F	S	✓
21. HS	20	2 (1-2)	Don't Know	✓	E	S	✓
22. MD	22	3 (3-5)	✓	✓	F	S	✓
23. OG	23	3 (3-5)	Don't Know	✓	E	S	✓
24. AM	25+	5 (3-5)	✓	✓	E	L	✓

DATABASE

DATA COLLECTION

1 Student	2 Search Time Min.	3 Useful Articles Received	4 Preference "P" "D"	5 Perceived Successful "Y" "N"	6 Perceived Easy "E"F"C"H"	7 Computer Exper. "L"S"N"	8 Increased Confidence "Y" "N"
1. LB	2	1 (1-2)	✓	✓	E	S	✓
2. JP	2	0	✓ ⊗	✓	6	S	✓
3. RG	3	1 (1-2)	✓	✓	C	S	✓
4. TP	5	6 (6-9)	✓	✓	F	L	✓
5. BQ	5	2 (1-2)	✓	✓	E	L	✓
6. DW	5	2 (1-2)	✓	✓	E	L	✓
7. CC	7	2 (1-2)	✓	✓	E	S	Don't Know
8. KF	7	1 (1-2)	✓	✓	F	L	✓
9. TH	9	3 (3-5)	✓	✓	E	L	✓
10. AC	10	3 (3-5)	✓	✓	E	S	✓
11. LD	10	6 (6-9)	✓	✓	E	S	✓
12. JM	10	4 (3-5)	✓	✓	F	S	✓
13. JR	10	6 (6-9)	✓	✓	F	S	✓
14. DS	10	3 (3-5)	✓	✓	E	S	✓
15. JR	12	5 (3-5)	✓	✓	E	S	✓
16. HC	13	12 (10+)	✓	✓	E	L	✓
17. MB	14	2 (1-2)	✓	✓	F	L	✓
18. DF	14	3 (3-5)	✓	✓	E	L	✓
19. JT	14	6 (6-9)	✓	✓	E	L	✓
20. MR	15	5 (3-5)	✓	✓	E	L	✓
21. DN	18	5 (3-5)	✓	✓	E	S	✓
22. CH	20	5 (3-5)	✓	✓	E	S	✓
23. GM	20	4 (3-5)	✓	✓	E	S	✓
24. KK	28	3 (3-5)	?	✓	E	L	✓

COPYRIGHT ISSUES FOR SCHOOLS AND LIBRARIES

A Selected ERIC Bibliography

Citations in this bibliography were selected from the Educational Resources Information Center (ERIC) indexes Current Index to Journals in Education (CIJE) and Resources in Education (RIE).

Bullock, Laura Chase. Shoplifting? No, Softlifting. 1986, 15pp. (Available from EDRS as ED 278 376).

Paper explores the reasons why people illegally copy (pirate) software and explains how illegal software penalizes both the publisher and the consumer. It is suggested that a district wide school policy needs to be created and enforced; steps for creating such a policy are outlined.

Campbell, Robert M.; Stern, Barrie T. ADONIS--A New Approach to Document Delivery. Microcomputers for Information Management: An International Journal for Library and Information Services. June 1987, 4 (2), pp. 87-107.

Reviews the copyright problems involved in interlibrary loans using photocopies of articles and describes the development of a document delivery system in which materials are stored on optical disk, printed on demand, and the copyright fee is included in pricing.

Connet, Michael R. Off-Air Fair Use and Abuse. Community & Junior College Libraries, Summer 1986, 4(4), pp. 35-40. (Available UMI: EJ 359 789).

Offers information about the legal implications of recording broadcast copyrighted programs. Examines Copyright Law provisions, fair use and establishing routine procedures for off-air recording.

Copyright Law and the Classroom: Photocopying, Videotaping and Fair Use. Journal of Law and Education, Spring 1986, 15 (2), pp.229-36. (Available UMI: EJ 337 550).

Clarifies the term "fair use" and lists four factors used in courts in determining fair use. Offers guidelines to practitioners for permissible duplication and describes instances in which duplication is prohibited.

Heller, James S. Copyright and Fee-based Copying Services. College and Research Libraries, January 1986, 47(1), pp. 28-37. (Available UMI: EJ 331 794).

The effect of the Copyright Act of 1976 upon fee-based library copying services is discussed. Also discusses commercial advantage, open collection, notice of copyright, multiple copying, fair use and the Williams and Wilkins case.

Helm, Virginia M. Schools, Technology, and the Law: Using VCRs in Educational Institutions, 1986. 12pp. (Available from EDRS in microfiche only as ED 272 993).

The restriction on educational use of videotapes needs to be clarified by Congress or by the Courts. The use of videos for instructional purposes during curriculum-related activities is allowed; a problematic question arises in the right of school libraries to view videotapes on school premises. The Redd Horne court ruling is discussed.

ERIC Clearinghouse on Information Resources, Syracuse University
030 Huntington Hall Syracuse, New York 13244-2340
(315) 443-3640

Helm, Virginia M. What Educators Should Know About Copyright. Fastback 233. Bloomington, IN: Phi Delta Kappa Education Foundation, 1986, 53 pp. (Available from EDRS as ED 279 329).

Because materials can be readily duplicated, educators need to know copyright regulations. This resource includes chapters on fair use, guidelines for photocopying, computers, A-V materials, videotape recordings, live transmitted performances and penalties for infringement.

Kranisch, Nancy, Comp. Copyright Policies in ARL Libraries. SPEC Kit 102. Washington, DC: Assoc. of Research Libraries, Office of Management Studies, 1984. 118pp. (Available from EDRS on microfiche only as ED 242 338).

This collection of copyright policies from ARL member libraries contains: photocopy guidelines, university copyright policies, reserve room policies, intra- and interlibrary policies, music, media, manuscripts and archive policies, and more.

Levina, Arthur J. Proprietary Rights in Data Bases and Software. Journal of Library Administration, Winter 1986, 7 (4), pp. 99-110.

This discussion of copyright protection for computer programs focuses on the "first sale doctrine" and "shrink wrap" licenses, copyright of databases, copyright ownership, and copyright notices.

Merriam, Elizabeth B.; And Others. Coping with Copyright. 2nd ed. Madison, WI: Wisconsin State Dept. of Public Instruction, 1986, 34 pp. (Available from EDRS as ED 278 414).

Intended to help librarians, media specialists, administrators and educators understand the ramifications of the Copyright Law and comply with its restrictions. Contains the National Commission on New Technological Uses of Copyrighted Works (CONTU) guidelines.

1987 Statement of Software Copyright: An ICCE Policy Statement. Computing Teacher, March 1987, 14 (6), pp. 52-53.

Developed by the International Council for Computers in Education, this statement recommends the adoption of a school district copyright policy, software use guidelines and copyright pages of software documentation to ascertain user's rights and obligations.

Stanek, Debra J. Videotapes, Computer Programs, and the Library. Information Technology and Libraries, March 1986, 5(1), pp. 42-54 (Available UMI: EJ 336 211).

The opinion of the American Library Association's stance on library use of copyrighted videotapes and software is expressed. Highlights include the Copyright Act, material lending and in-house use of tapes and computer programs.

Compiled by Elena D. Beattie October 1988

* *

All citations with EJ numbers are journal articles from Current Index to Journals in Education, and can be obtained from a library, borrowed through interlibrary loan, or, if so indicated, ordered through UMI Article Clearinghouse, 300 N. Zeeb Rd., Ann Arbor, MI 48106 ($10.75 per article). Those with ED number are from Resources in Education, and can be read at a library with an ERIC microfiche collection or ordered in microfiche or paper copy from EDRS, 3900 Wheeler Ave., Alexandria, VA 22304. Call toll free: 800-227-3742 for shipping prices or to order by credit card.

ERIC Clearinghouse on Information Resources
Syracuse University
030 Huntington Hall
Syracuse, New York 13244-2340
(315) 443-3640

Mini-Bib

THE ROLES OF THE SCHOOL LIBRARY MEDIA SPECIALIST

A Select ERIC Bibliography

Citations in this bibliography were selected through a computer search of the Educational Resources Information Center (ERIC) database. The following descriptors were used: **media specialists, school libraries; curriculum design, curriculum development, instructional design, instructional development, library role, teacher role.**

Aaron, Shirley L. (Winter 1988). The Role of Professional Development Activities in Promoting Improved Instructional Services in the Library Media Program. *School Library Media Quarterly* 16(2), pp. 84-87. (Available UMI: EJ 365 081).

Argues that a strong program of professional development is essential to library media specialists' efforts to keep up with their evolving instructional role. Major competencies required of media specialists are summarized.

Barron, Daniel D. (March 1987). Communicating What SLM Specialists Do: The Evaluation Process. *School Library Journal* 33(7), pp. 95-99. (Available UMI: EJ 351 291).

Discusses the importance of communication with the entire educational team and school community about the benefits to expect if a school library media specialist has the opportunity to fulfill his or her professional responsibility.

Callison, Daniel. (October 1987). Evaluator and Educator: The School Media Specialist. *TechTrends* 32(5), pp. 24-29. (Available UMI: EJ 362 659).

Reviews the role of a public school media specialist and suggests resources for further reading. Specific topics include the teaching of information skills, the evaluation process, the impact on curriculum, and others.

Craver, Kathleen W. (Summer 1986). The Changing Instructional Role of the High School Library Media Specialist 1950-84: A Survey of Professional Literature, Standards, and Research Studies. *School Library Media Quarterly* 14(4), pp. 183-191. (Available UMI: EJ 341 612).

Although a review of the literature on the instructional role of the media specialists reveals a pattern of progression from 1950 to 1984, analysis of the research in this area indicates a time lag between actual practice and the instructional role espoused by the standards and the literature.

Eisenberg, Michael B., and Berkowitz, Robert E. (1988). *Curriculum Initiative: An Agenda and Strategy for Library Media Programs*. Norwood, NJ: Ablex. (Available from Ablex Publishing Corp., 355 Chestnut St., Norwood, NJ 07648-9975. $27.95. ISBN-0-89391-486-X).

This book provides practicing school library media specialists and students in professional degree-granting programs with both a conceptual framework for and practical approaches to the curriculum-related responsibilities of the school library media program. Both library and information skills instruction and curriculum support services are emphasized.

Ferstl, Kenneth L. (July/August 1987). Not Just Librarians, But Teachers Too. *Catholic Library World* 59(1), pp. 16-18. (Available UMI: EJ 358 341).

This paper presented at the 1987 convention of the Catholic Library Association explores the role of the librarian as a teacher in school and public libraries and among clienteles ranging from school-age children to older adults.

Galey, Minaruth, and Grady, William F. (April 1987). Is the Role of Specialists in Media and Information Technologies in Public Schools Changing? *TechTrends* 32(3), pp. 12-16. (Available UMI: EJ 354 418).

Offers a brief discussion of state certification requirements and how they determine changes in the role of professional practitioners of media and information technologies in public schools. This is followed by the results of a 1985 survey of certification requirements.

Master, Nancy L., and Master, Lawrence S. (1986). *Perceptions of School Librarians as Curriculum Leaders*. Clark County, NV: Clark County Public Schools. 26pp. (Available EDRS: ED 271 120).

Describes a study that was undertaken to determine what type of curriculum leadership roles school librarians were exercising in the nation's nineteenth largest school district. Analysis of the survey results is given, and nine major conclusions are discussed.

McBeath, Ron J. (1987). Stages in Learning, Teaching, and Media Support Services. *Educational Technology* 27(10), pp. 50-54. (Available UMI: EJ 369 285).

Presents four stages of learning together with teaching techniques appropriate to each stage. The role of the media specialist in meeting the needs of students and teachers at each stage is discussed, and the four stages of media library services are outlined.

McIntosh, Christine. (October 1987). The Need for a Computer/Media Coordinator in a Public School System. *TechTrends* 32(5), pp. 16-19 (Available UMI: EJ 362 658).

Discusses the implementation of computers in public schools and ways in which a district-wide media coordinator could help in the process. Highlights include duties of the coordinator, including planning curriculum, training staff, development of a media resource center, and evaluation; effects on the school libraries; and effects on learning.

Pretlow, Delores Z. (October 1987). School Libraries: A Time for Change. *School Library Journal* 34(2), p. 48. (Available UMI: EJ 359 753).

The author states that library media specialists have not been adequately utilized in schools, especially at the elementary level. Reasons why the library should be an integral part of the instructional program are discussed, and several ways in which the librarian can aid students in academic achievement are listed.

Compiled by Nancy R. Preston September 1989

****

Citations with EJ numbers are journal articles from Current Index to Journals in Education. They can be obtained from a library, borrowed through interlibrary loan, or, if so indicated, ordered from: UMI Article Clearinghouse, 300 N. Zeeb Road, Ann Arbor, MI 48106 (telephone 1-800-732-0616). $10.75 per article.

Citations with ED numbers are documents from Resources in Education. They can be read at a library with an ERIC microfiche collection or ordered, in microfiche or paper copy, from: ERIC Document Reproduction Service (EDRS), 3900 Wheeler Ave., Alexandria, VA 22304 (telephone 1-800-227-3742). Prices vary.